



XPON ONT 1GE with Wi-Fi n

OP1GWS
Installation Manual

Rev 1.0

1.1 Product Description

Thanks for choosing the 1LAN+WiFi Home Gateway Unit. All PPC terminal devices are designed for fulfilling FTTH and triple play service demand of fixed network operators or cable operators. These boxes are based on the mature GPON and Gigabit EPON technology, which have high ratio of performance to price, and the technology of 802.11n WiFi (2T2R), Layer 2/3. They are highly reliable and easy to maintain, with guaranteed QoS for different service. And they are fully compliant with GPON and EPON technical regulations such as ITU-T G.984.x, IEEE802.3ah and technical requirement of EPON Equipment. Dual mode PPC ONT can detect and exchange PON mode automatically.

1.2 Application Chart

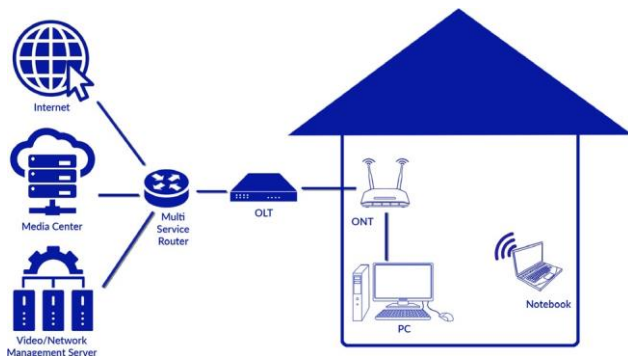


Fig 1 : **Network Architecture**



Fig 2: **OP1GWS**

1.3 Technical Parameters

Technical items	OP1GWS (1GE+WiFi Opterna ONT)
PON interface	1 GPON/EPON interface, SC single-mode/single-fiber. GPON: uplink 1.25Gbps, downlink 2.5Gbps; EPON: symmetric 1.25Gbps.
Wavelength	Tx 1310nm, Rx 1490nm
Optical interface	SC/APC
LAN interface	1x 10/100/1000Mbps auto adaptive Ethernet interfaces.10/100M Full/Half, 1000M Full Duplex, RJ45 connector.
Wireless	Compliant with IEEE802.11b/g/n, 300Mbps, 2T2R, 1 internal antenna, 1 external antenna.
LED	5, For Status of POWER, LOS, PON, LAN, WiFi.
Operating condition	Temperature: -5°C~55°C Humidity: 10%~90% (non-condensing)
Storing condition	Temperature:- 30°C~60°C Humidity :10%~90% (non-condensing)
Power supply	DC 12V/0.5A
Power consumption	≤6W
Dimension	120mm×78mm×30mm (L×W×H)
Net weight	0.13Kg

1.4 Package Contents

Contents	Quantity
Opterna ONT	1 pcs
Power Adapter	1 pcs
User manual	1 pcs

2.1 Installation Requirements

Installation Environment Requirements

PPC ONT equipment must be installed in the interior, and to ensure the following conditions:

- Confirmation at the Opterna ONT installation at sufficient space to facilitate cooling machine.
- Opterna ONT suitable operating temperature of $-5^{\circ}\text{C} \sim 55^{\circ}\text{C}$, humidity 10% to 90%.
- Device workplace should avoid radio transmitters, radar stations, and high-frequency interference from power equipment.

Equipment Installation

1. Installed on the desktop
Place the machine on a clean bench, this installation is relatively simple, you can observe the following operation:
 - Ensure the smooth workbench.
 - Around the device enough space for heat dissipation.
2. Mounted on the wall
 - Observation Opterna ONT equipment chassis two cruciform recess, in accordance with the position of the groove, installed two screws in the wall.
 - The original selected two mounting screws gently snap into recesses aligned.
 - Slowly let go, so that the device under the support of the screw hanging on the wall.

2.2 LED Indications

LED	Panel Marking	Status	Description
Power	POWER	On	The device is powered up.
		Off	The device is powered down.
Optical signal loss	LOS	Blink	Device does not receive optical signals.
		Off	Device has received optical signal.
Registration	REG	On	The device is registered to PON system
		Off	Device is not registered to PON system
		Blink	Device is registration is incorrect
Interface	LINK/ACT	On	Port is connected properly (LINK).
		Off	Port connection exception or not connected.
		Blink	Port is sending or/and receiving data (ACT).
WiFi	WiFi	On	WiFi is running.
		Off	WiFi is not working.



Fig 3: **ONU Back Panel**

Name	Function
PON	Connect to OLT by SC type fiber connector, single mode optical fiber cable.
LAN	Connect PC or other devices with Ethernet port by Cat5 cable, RJ-45 connector.
RST	Press RST button over 10 seconds, onu restores factory default and reboot.
POWER	Connect with power adapter. DC 12V, 0.5A.

Web Management

1LAN+WiFi dual mode Opterna ONT provides simple Web management function.

3.1 Default Configuration

The following is the default device configuration information.

- Local (LAN access) Username: admin , Password: OPTERNA (in Caps)
- LAN port management IP address: 192.168.1.1/24

3.2 Basic Configuration

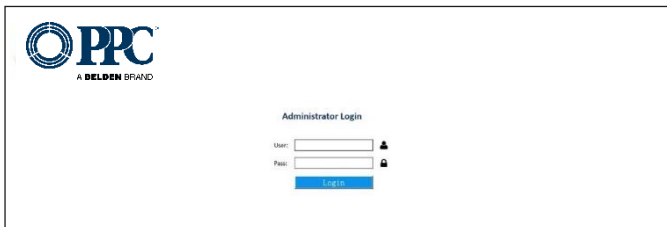


Fig 4: Login Interface

Web login default username: **admin** Password: **OPTERNA** (in Caps)

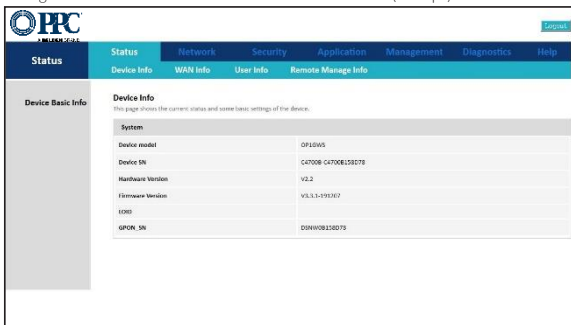
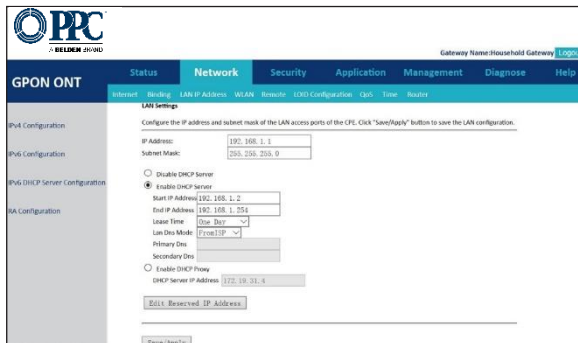


Fig 5: Status

WAN Info display the status of all WAN connections and the network information.



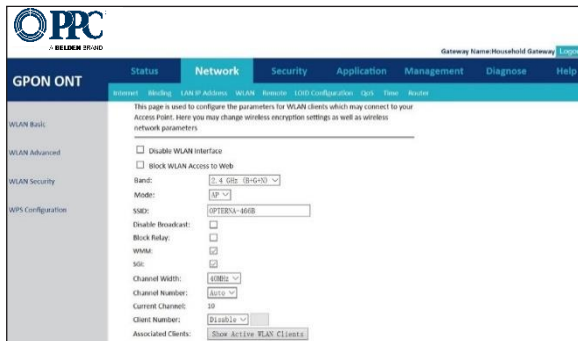
The screenshot shows the 'Network' tab in the PPC web interface. The 'LAN Settings' section is active, displaying configuration options for IPv4 and IPv6. The IPv4 configuration includes fields for IP Address (192.168.1.1) and Subnet Mask (255.255.255.0). The DHCP server is enabled, with Start IP Address (192.168.1.2) and End IP Address (192.168.1.254) fields. The Lease Time is set to 'One Day' and the LAN Dis Mode is 'From IP'. The DHCP Server IP Address is 172.19.31.5. A 'Save/Apply' button is at the bottom.

Fig 6: **LAN Setting**

IP Address and Subnet Mask: LAN port IP address and Mask.

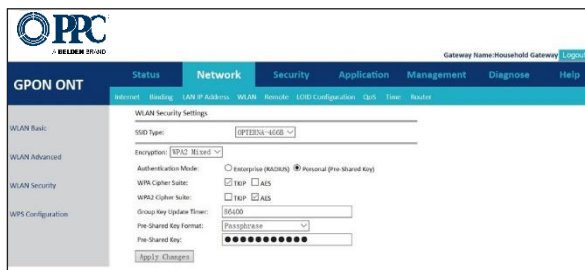
DHCP option: Enable or disable DHCP server and configure IP address pool, DNS, etc.

Note: DHCP server changes take effect after the device is restarted.



The screenshot shows the 'Network' tab in the PPC web interface. The 'WLAN' sub-tab is active, displaying configuration options for the wireless network. The 'WLAN Basic' section is expanded, showing fields for Band (2.4 GHz (B-G-N)), Mode (AP), SSID (OPTERA-460B), and Channel Width (40MHz). The 'WLAN Security' section is also expanded, showing fields for WPA2 (WPA2) and WPA3 (WPA3). The 'WPS Configuration' section is expanded, showing fields for Current Channel (39) and Client Number (Disable). A 'Show Active WLAN Clients' button is at the bottom.

Fig 7: **WLAN Setting**



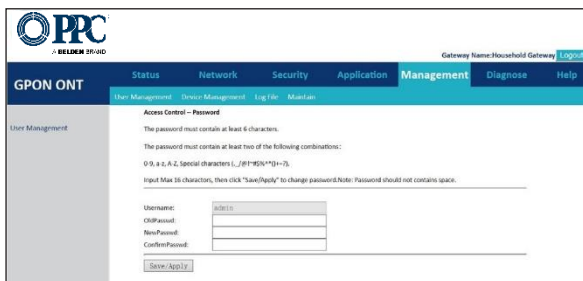
The screenshot shows the 'WLAN Security Settings' page. The left sidebar has a menu with 'WLAN Basic', 'WLAN Advanced', 'WLAN Security', and 'WPS Configuration'. The main content area is titled 'WLAN Security Settings' and includes the following fields:

- SSID Type:
- Encryption:
- Authentication Mode: ☐ Enterprise (RADIUS) ☒ Personal (Pre-Shared Key)
- WPA Cipher Suite: ☒ TKIP ☐ AES
- WPA2 Cipher Suite: ☐ TKIP ☒ AES
- Group Key Update Timer:
- Pre-Shared Key Format:
- Pre-Shared Key:
-

Fig 8: **WLAN security setting**

WLAN Basic displays the current configuration information. Modify these parameters to Change WiFi basic features.

Security is used to set up encryption for SSID



The screenshot shows the 'User Management' page. The left sidebar has a menu with 'User Management', 'Device Management', 'Log File', and 'Maintain'. The main content area is titled 'Access Control - Password' and includes the following text and fields:

The password must contain at least 6 characters.

The password must contain at least two of the following combinations:

0-9, a-z, A-Z, Special characters (!,/,@,*%&^&#++?)

Input Max 16 characters, then click "Save/Apply" to change password. Note: Password should not contain space.

Username:

Old Password:

New Password:

Confirm Password:

Fig 9: **User manage settings**

User manage modify the password of ordinary user account of "user"